

# Chapter 5 Environmental Management Issues

## 5.1 Introduction

This chapter summarizes an analysis of certain environmental management issues required by NEPA and CEQ guidelines. These issues include effective use or conservation of some types of resources, consistency with other planning efforts, and mitigation of unavoidable impacts. These issues are very broad in scope and in some cases not relevant to the alternative actions considered in this EIS.

## 5.2 Short-term Uses Versus Long-term Productivity

*Short-term uses* are generally those that determine the present quality of life for the public. The quality of life for future generations depends on *long-term productivity*; i.e., the capability of the environment to provide resources on a sustainable basis. It is known that fisheries have the potential to reduce long-term productivity of pelagic fish and non-fish resources if management standards are not met. Monitoring determines whether fishery control measures are effective and are being correctly applied to achieve management objectives.

None of the alternatives for seabird interaction avoidance or squid jig fishery management would be expected to cause long-term loss of productivity of fish resources harvested by fisheries managed under the Pelagics FMP or the HSFCA.

Minimization of interactions between the Hawaii-based longline fishery and black-footed and Laysan albatrosses will benefit those populations in the long-term and further protect short-tailed albatross populations from potential impacts to long-term productivity. However, implementing additional or more effective interaction avoidance methods to reduce the seabird interactions in the Hawaii-based longline fishery is unlikely to prevent long-term loss of productivity of other North Pacific seabird populations if interactions in other Pacific demersal and pelagic longline fisheries are not also reduced. Demonstration of effective seabird interaction avoidance measures along with operational benefits to modified fishing techniques such as side-setting could result in broader international application of those techniques and consequent increases in long-term productivity of other seabird populations.

The alternatives considered for squid fishery management, with the exception of Alternative SQB.2, which would result in the phasing out of U.S. high seas squid fishing, would not alter the catch or effort in that fishery. The alternatives that include enhanced monitoring and reporting (all alternatives except SQA.1 (Sub-objective A No Action), SQB.1 (Sub-objective B No Action) and SQB.2) however, would improve the potential for long-term sustainability of the resource through better understanding of catch and effort relationships and the effects of environmental variability on stocks.

### **5.3 Irreversible and Irretrievable Commitments of Resources**

*Irreversible commitments* of resources are actions that disturb either a non-renewable resource or a renewable resource to the point that it can only be renewed over a long period of time (decades). Loss of biodiversity may be an irreversible resource commitment. For example, extinction of an endangered species, such as the short-tailed albatross, would constitute an irreversible loss. An *irretrievable commitment* is the loss of opportunities for production or use of a renewable resource for a short to medium period of time (years).

The intent of the seabird interaction avoidance measure alternatives is to further minimize interactions of seabirds with the Hawaii-based longline fishery. Although there has never been observed or reported a fatal interaction between this fishery and the endangered short-tailed albatross, additional or more effective interaction avoidance methods would further reduce this possibility and decrease fatal interactions with the Laysan and black-footed albatrosses.

The alternatives for squid fishery management do not involve the commitment of natural resources. Initiation of a new management regime, regional, national or international, would involve an expenditure of capital and human labor.

### **5.4 Energy Requirements and Conservation Potential of the Alternatives**

The use of fossil fuels for fishing vessel operation and government surveillance and enforcement activities is an irreversible resource commitment. The seabird interaction avoidance measure alternatives are expected to have insignificant direct or indirect impacts on energy requirements. Fishing effort, and hence vessel fuel consumption, would not be altered. Depending on the alternative and option selected, there would be minor energy expenditures for constructing hardware such as a setting chute.

Likewise, the squid jig fishery management alternatives, with the exception of Alternative SQB.2, would not affect effort in that fishery. Although Alternative SQB.2 would phase out U.S. pelagic squid jigging, this alternative might have the highest energy requirement because the affected vessels would likely be refitted for service in other fisheries.

### **5.5 Urban Quality, Historic Resources and Design of the Built Environment, Including Re-use and Conservation Potential of the Alternatives**

Neither the seabird interaction avoidance alternatives or squid fishery management alternatives would directly affect urban quality, historic resources or design of the built environment. Squid fishery management Alternative SQB.2 could indirectly result in re-use of displaced vessels.

### **5.6 Cultural Resources and Conservation Potential of the Alternatives**

Section 4.9 addresses cultural issues in the context of social impacts. Neither the seabird interaction avoidance measure nor the squid fishery management alternatives would directly or indirectly affect cultural resources.

## **5.7 Possible Conflicts Between the Alternatives and Other Plans**

The seabird interaction avoidance measure alternatives are supportive of the Recovery Plan for the short-tailed albatross and the National Plan of Action for seabirds. Squid jig fishery management Alternative SQA.4, development of a new squid FMP, could potentially conflict with the ecosystem-based pelagics FMP for the region, which is now under discussion. It is likely however, that any such ecosystem plan would supercede and subsume a squid FMP.

## **5.8 Adverse Effects that Cannot be Avoided**

None of the seabird interaction avoidance alternatives or squid fishery management alternatives would result in significant negative direct or indirect effects that cannot be avoided. The seabird interaction avoidance method alternatives are, in fact, mitigation of historic adverse effects of the Hawaii-based longline fishery on albatross populations.

## **5.9 Possible Mitigation Methods for Unavoidable Adverse Effects**

The seabird interaction avoidance alternatives are themselves mitigation measures for interactions with longline fishing gear. Projections of numbers of black-footed and Laysan albatrosses under the Preferred Alternative are much lower than historic interaction rates in either sector of the fishery. The monitoring systems already in place (observer program, routine assessments, annual reports) will be continued and will serve to alert fishery managers to unforeseen consequences of implementation of the Preferred Alternative.

The squid fishery management Preferred Alternatives are intended to provide basic fishery information necessary to understand the effects of the fisheries on pelagic squid stocks in the Pacific Ocean, and establish mechanisms for institution of management measures under the Pelagic FMP should they become necessary. Providing a more responsive management framework for high seas squid jigging would allow future mitigation of unavoidable adverse effects in the event such effects are detected.